NSF 99-172

OFFICE OF THE DIRECTOR

September 20, 1999

National Science Foundation Merit Review

Dear Colleagues:

Merit review is a critical component of the National Science Foundation's decision-making process for funding research and education projects. Two years ago, NSF announced changes in its merit review criteria (Important Notice No. 121, *New Criteria for NSF Proposals*, July 10, 1997). The changes reflected extensive analysis and discussion, with community input. Recommendations were considered to simplify the merit review criteria and harmonize them with the NSF strategic plan, in order to weigh a proposal's technical merit, creativity, educational impact and its potential benefits to society. This process resulted in the two criteria now in effect, which address the intellectual merit of the proposed activity and its broader impacts.

We want to ensure that the criterion relating to broader impacts is considered and addressed in proposals and reviews. We ask you -- as principal investigators who develop and submit proposals, and as experts who review proposals -- to consider both intellectual merit and broader impacts in preparing and evaluating proposals for NSF. At the same time, we will continue to strengthen NSF's internal processes to ensure that both criteria are appropriately addressed when making funding decisions.

Through use of rigorous, competitive merit review, NSF maintains high standards of excellence and accountability. It enables investments in projects that couple the best ideas from the most capable researchers and educators, with the advancement of discovery and learning and the enrichment of the science and engineering resources. The full text of the two merit review criteria and supporting explanations, from the upcoming revision to the NSF Grant Proposal Guide (NSF 00-2), are provided in the attachment.

Rita R. Colwell
Director

NSF MERIT REVIEW CRITERIA

NSF merit review criteria are listed below. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given proposal. Each reviewer will be asked to address only those that are relevant to the proposal and for which he/she is qualified to make judgments.

Criterion 1: What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

Criterion 2: What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

PIs should address the following elements in their proposal to provide reviewers with the information necessary to respond fully to the above-described NSF merit review criteria. NSF staff will give these elements careful consideration in making funding decisions.

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students, and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- are essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

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